

energized

Volume 5

THE MONTHLY NEWSLETTER FOR ENERGY MANAGERS AND PUBLIC AFFAIRS OFFICERS

Issue 6

Message To Energy Managers:

Energy is your major focus. All too often, however, another equally important topic gets overlooked: water conservation. Savings from implementing water efficiency measures and detecting and repairing water leaks can be as great as from energy efficiency.

Many parts of the country experienced severe drought conditions over the past few years. As the summer season begins, think WATER.

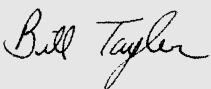
FY2000 marks the baseline for water reporting, and is the basis against which water conservation goals will be measured.

If you suspect your facility has a major water leak, check out NFESC's leak detection services.

Incorporate water conservation into your awareness efforts. Take advantage of the many tools available: the Navy Energy web site, WaterWiser, and others featured in this issue.

Speaking of water, congratulations to USS ANTIETAM, winner of both a SECNAV and FEMP award for FY98 accomplishments.

Sincerely,



William F. Tayler
Navy Shore Energy
Program Manager

ARE YOU LOSING WATER?



If your facility experiences more than 10% unaccountable loss rates, you may benefit from an acoustic leak detection survey. NFESC/Code 232 has performed leak detection surveys at facilities around the world for all branches of the military. The survey performed at NAS Barbers Point provides a good

example of how NFESC services can help identify problem areas on your system.

An NFESC team performed a survey at NAS Barbers Point during two visits on 5-30 April and 24 May - 23 June, 1999. By performing an acoustic survey of all accessible valves and conducting

early morning metering exercises, the team identified and located 113 leaks on the potable water distribution system. The total estimated leak rate was between 360 and 475 gallons per minute. These conservative estimates were confirmed to be lower than actual when the base closed and operations moved to other facilities. The cost of the leak detection survey amounted to less than half the cost of the water lost in one year.

If you feel your facility could benefit from NFESC's leak detection services, please contact any of the following:

Maria Z. Smith, 805-982-6072, smithmz@nfesc.navy.mil

Don Hill, 805-982-3545, hilldr@nfesc.navy.mil

Mike Rocha, 805-982-3597, rochams@nfesc.navy.mil

WATER, WATER EVERYWHERE



Are you looking for materials to enhance your water conservation awareness efforts?

The Navy energy web site has a wealth of information on water conservation: <http://energy.navy.mil> (Select the Awareness/Awards pick.)

First, check out the Tools section.

Did you know that the *Energy Tips and Clips* diskette the DON Energy Program provided a few years back contains tips and clipart on water conservation? The full contents of the diskette are available for downloading. Click on [Energy Tips & Clips diskette](#), then [Energy Tips](#) text to download the Word document text file. At the end of the document under **Index of Tips by Category**, you'll find the heading *Water Conservation* listing seven tips on this topic. Check out these tips and you'll be directed to clipart related to the water conservation tip.

Download the relevant clipart by clicking on [Click here to view the thumbnail page](#) on the *Energy Tips & Clips diskette* Home Page.

Want more tips? Select *175 Tips to Save Energy. Water Heating and Water Conservation* is one of the categories covered, just after the *Building Envelope* category. Select also the category *Water Conservation, Efficiency and Statistics under 365 Energy and Water Facts*.

Go to *Flip & Drip Column*. Two of these amusing advice columns address water conservation: *Flip & Drip Head Toward Water Efficiency and Flip & Drip Are All Wet*.

Did You Know contains statistics on water conservation.

You'll even find water quotes from World Watch Institute and Benjamin Franklin under *Motivational Quotes*.

Continued on page 2

DON Energy Awareness Website: Access the tools on the Navy Energy website for ideas, planning tips, and tools. Set your browser to <http://energy.navy.mil> and scroll down the left-hand column to the Awareness pick.

Now let's explore the Puzzlers section. Click on [Top Ten Reasons to Conserve Energy and Water](#) for humorous reasons to conserve water, and [Cartoons](#) for a hilarious water conservation cartoon.

Take advantage also of the Water Conservation Ashore website. At the main Navy Energy Website (<http://energy.navy.mil>), select the Water pick, or to access it directly, set your browser to <http://energy.navy.mil/key-areas/WaterWeb.html>

This site contains the latest military publications and recently published articles on water conservation, the CECOS water conservation training presentation, and a spreadsheet to help you decide if it makes economic sense to replace your plumbing fixtures.

DOE SETS WATER CONSERVATION GOALS, USAGE REPORTING SCHEDULE

The U.S. Department of Energy (DOE), as directed by Executive Order 13123, has issued a schedule for developing a water usage baseline and a format for reporting water usage.

Federal agencies are required to establish an FY00 baseline (1 OCT 1999 – 30 SEPT 2000) for potable water usage at facilities owned by the U.S. Government, reporting data in Million Gallons per Year.

Agencies should use actual data where available. Agencies with facilities where no actual water usage information is available should estimate water usage. The table below provides selected Federal water use indices that may be relevant to your facility. If your facilities have other significant or unusual water usage, contact FEMP for assistance.

Category	User	Unit	Gallons/unit/per day	
			Range	Typical
Commercial	Airport	Passenger	4-5	3
	Apartment house	Person	100-200	100
	Laundry (self-service)	Machine	400-650	550
	Office	Employee	8-20	15
	Public Lavatory	User	3-6	5
	Restaurant (including toilet)			
	Conventional	Customer	8-10	9
	Open Space			
	Non-turf	Acre		785
	Turf	Acre		1571
Recreational	Dormitory (bunk house)	Person	20-45	35
	Picnic park with flush toilets	Visitor	5-10	6
	Swimming pool and beach	Customer	5-15	10
Institutional	Assembly hall	Seat	2-4	3
	Hospital medical	Bed	130-250	150
		Employee	5-15	10

Agencies are required to report FY00 water usage to DOE in their FY00 annual energy reports. Federal water usage will thereafter be

reported every two years beginning in 2002. Agencies are also required to report water conservation measures implemented and water saved on an annual basis.

Water Conservation Goals

By 1 January 2005, agency, site, and facility water management plans and operating procedures must be developed or revised to include the applicable O&M recommendations listed in the FEMP Water Efficiency Best Management Practices (BMPs).

Agencies are to implement a water efficiency program that involves not less than 4 separate BMPs. The implementation schedule is as follows:

- 5% of facilities by 2002
- 15% of facilities by 2004
- 30% of facilities by 2006
- 50% of facilities by 2008
- 80% of facilities by 2010

For further information, contact Dan Magro, NFESC, 805-982-3529; E-mail: magrodt@nfesc.navy.mil

TOILETOLOGY 101

Are you ready to pursue your "Bachelor of Bathrooms Degree?" Maybe not, but if you have an active water conservation program, toilets must be an integral component. After all, toilets account for more than a quarter of the water usage in the typical household that has not taken conservation measures. They still account for nearly one-fifth of the typical household that has taken measures to conserve.

Toiletology 101 is an online resource set up like a course complete with lesson plans designed to instruct you in all aspects of toilet selection, operation, and repair. The introductory page says it all: "Almost everything you ever wanted to know about your toilets! And some things you probably never knew you needed to know."



Set your browser to <http://www.toiletology.com/index.shtml> and click on the Lesson Plan icon.

You'll find step-by-step instructions on replacing broken components, supplemented in many cases by illustrations and photos. The site also offers troubleshooting solutions for even the most minute problem. There's a consumer report on purchasing low-flush models. If you're really interested in the topic, there's even a thorough history of the toilet. If you want even more details than what's in the lesson plans, check out the Reciprocal Links. There are dozens and dozens of links. Click on [Fine Homebuilding: Choosing a Toilet](#), for example, and you're sent to an article in that magazine that interviews plumbers and presents their experiences with low-flush models.

The lesson plans draw from many sources, including studies, newspapers, personal experiences and conversations. They are packed full of interesting stories, anecdotes, facts, and statistics. News items range from a toilet seat that automatically lowers itself (the article has an amusing animated image) to legislation to outlaw low-flush toilets.

Can't get excited over the subject of toilets? Do you dread the very idea of incorporating toilets into your water conservation awareness efforts because the topic is boring or a turn-off? Check out this site. You may change your mind.

SECNAV ENERGY AWARD WINNERS

USS ANTIETAM is a double winner:

- Winner of the FY98 Secretary of the Navy Energy Award in the Small Ship Category—receiving a monetary award of \$20,000 and the privilege of flying the SECNAV energy flag for 1 year.
- Winner of a 1999 U.S. Department of Energy's Federal Energy Management Program Mobility Energy Award for Organization.

The USS ANTIETAM's Energy Conservation Program saved more than \$1 million in energy related costs in FY98, primarily with no-cost, low-cost initiatives including: efficient use and maintenance of energy consuming, producing and distribution equipment; awareness; and compliance with energy management directives.

ANTIETAM won three NAVSEA energy conservation incentive awards for the measures it undertook to save energy. ANTIETAM personnel surveyed the entire ship for lagging and insulation deficiencies and completed over 200 improvement jobs, which not only saved significant amounts of energy, but also improved the standard of living for the sailors.

ANTIETAM used 13,130 barrels of fuel less than expected for an energy cost savings of \$525,900. A

USS ANTIETAM (CG-54) SAVES MORE THAN \$1 MILLION

strategy used by ANTIETAM to decrease fuel stocks reduced de-fueling and disposal of hazardous waste costs by an estimated \$215,000. Additional savings of \$114,500 were realized as 143,216 gallons of fuel were not wasted.

ANTIETAM personnel requested and received gas turbine generator training and system grooming, which saved an estimated \$50,000 in repair and fuel savings. Total savings for a battle lantern battery upgrade program was \$78,200. Savings to ANTIETAM

families due to education, distribution of the "Energy Saving Tips at Home" booklet, and car pooling was \$40,000. Engineers developed procedures to maintain the trim of the ship bow down, reducing fuel use by 4% for a cost savings of approximately \$96,000.

FTSCPAC conducted high-pressure compressed air system grooming that heightened system integrity and eliminated constant operation of compressors, saving approximately \$40,000.

Ship's Force designed an at-sea garbage chute that allowed the crew to safely dispose of trash and garbage contained in paper bags made from recycled paper instead of plastic bags. The system avoids an estimated \$3,000 a year in the cost of plastic bags.

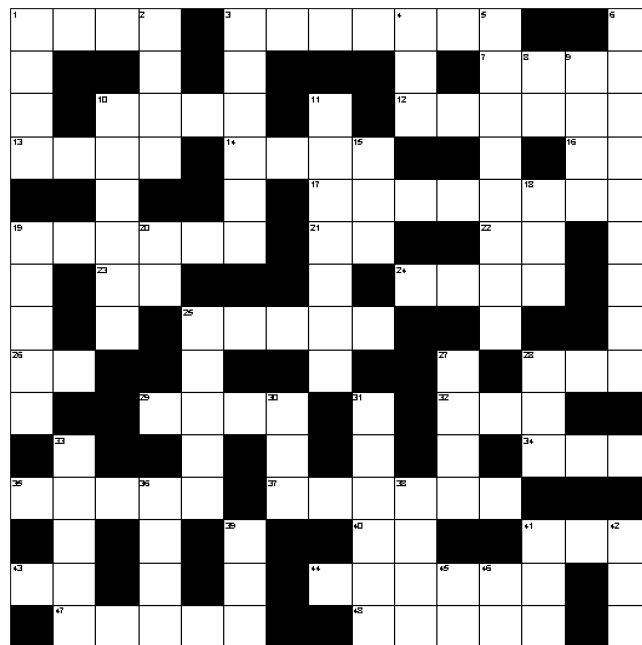
WATER PUZZLER

ACROSS

- Take care
- A tumble action _____ washer uses an average of 30% less water & 40-50% less energy.
- Use a bucket instead of a _____ when washing the car.
- A highly infectious disease
- Take a quick _____ rather than a bath.
- Flip & _____ advice column
- Most of the world's water contains this mineral.
- Abbr. for artificial intelligence
- Install low-flow _____ on kitchen and bathroom sink faucets.
- A dripping _____ can waste up to 20 gallons of water a day.
- Masculine of "Ma"
- Indefinite article meaning "one"
- Opposite of from
- Turn to _____ five in your lesson plan.
- Read your water _____
- Spanish for "yes"
- The _____ test should be performed on every toilet a couple of times a year.
- Low _____ showerheads
- An expression of surprise
- Feminine of "Dad"
- Don't leave the water running when brushing your _____
- A leaking _____ can waste up to 200 gallons of water a day.
- Opposite of yes
- The U.S. uses 400 billion gallons of water per _____
- Country across the Atlantic from the U.S.
- When it's time to replace your _____, consider a horizontal-axis (tumble action) model.
- Americans now spend about \$50 billion each year on residential water and _____ bills.
- Momma always said to eat your _____ green vegetables.

DOWN

- Toilet (nautical)
- Water, water, everywhere, but not a _____ to drink.
- Water _____; commode.
- Masculine of hers
- A water _____ may be the next global crisis facing this planet.
- Method of landscaping that conserves water.
- Expression of pain
- To make withered and dry
- Use showerheads that use no more than 2.5 gallons per _____
- Leaky toilets can usually be repaired inexpensively by replacing the _____
- A popular afternoon drink
- Number after zero
- Low _____ toilets
- Abbr. for Commanding Officer
- _____ around plants, bushes and trees to help retain soil moisture.
- Conserve
- Install a _____ in the tank of your old toilet that partitions off a section so it can't fill with water.
- What water is.
- Waterless device found in some DON men's rooms
- Check toilets for silent _____
- To melt
- Opposite of win
- Abbr. for Commander
- "When the well's _____, we know the worth of water."
- _____ Make it Happen!
- A laugh
- Letter of the alphabet after "EE" and before "GE"





Check it Out

CHECK OUT THE NEW WATER WISER MATERIALS

To assist in your water conservation initiatives, the American Water Works Association's Water Wiser web site has posted two new items. Set your browser to www.waterwiser.org

Select *Water Conservation Tips for Home: Simple things you can do to save water and money at home*. Facts and tips are presented under the following headings: [INDOOR] Leak Detection & Repair; Toilets; Showers & Faucets; and Major Appliances; [OUTDOOR] Landscaping & Xeriscape; Irrigation; and General Outdoor Tips.

How much water is used in a typical American home? To find out, select *Residential Water Use—Potential Savings by End Use (Typical Single Family Home)*, which was updated in 1999. This report indicates the daily consumption and percent of total consumption by various end uses, such as toilets, showers, baths, faucets, clothes washers, dishwashers, and leaks. Tips are given to save water, and statistics are provided on the potential water savings of various measures.

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Watts News? We want to hear from you.

Tell us about the energy initiatives you're working on, the problems you encounter, and the solutions you discover.

Submit article ideas, comments, or questions to:

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Be sure to include your name and commercial phone number.

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